



NOTEBOOK NEWS

FIRST MASS-MARKET LAPTOP HAS ITS 20TH BIRTHDAY

This month we reach a milestone in notebook history and we wish happy birthday to the world's first mass-market 'portable' laptop computer: the Toshiba T1100. Unveiled two decades ago, this 4kg beast of a mobile device was truly groundbreaking – or possibly backbreaking – when it first appeared.

However, just a cursory glance at its specification tells us how far and how fast the industry has developed since 1985. At its launch, the T1100 had an Intel 80C88 processor running at a then blistering 4.77MHz. It was loaded with the MS-DOS 2.11



operating system, one 720-kilobyte 3.5" floppy disk drive (the first to go in a mass-marketed PC) for storage, and 512KB of RAM. The system was 12" wide, 3" high and 12" deep.

Described by Toshiba as "a triumph of miniaturisation technology", the T1100 had a black and white 9.1x4.7" display with a resolution of 640x200 pixels, and optional 14.4Kbit/s modem connectivity. It's not only the weight of the device that was hefty, but also its price tag: it cost more than €4,000 (around £2,750) in 1985.

FLASH MEMORY BOOST TO NOTEBOOK BATTERY LIFE

Samsung Electronics has developed what it claims is the world's first solid state disk (SSD) based on NAND Flash memory technology.

The electronics giant explained that the SSD architecture, which does not have any moving parts, has a power consumption that is less than five per cent of that made by modern hard disk drives. When incorporated into new notebooks, the mobile firm estimates that overall battery life can be boosted by more than 10 per cent.

As an added bonus, the NAND-based SSD memory, which can be produced with capacities of up to 16GB using current manufacturing techniques, weighs less than half the amount of a comparably sized conventional hard drive. And because it has no moving parts, storage based on the technology will have minimal noise and heat emissions.

Samsung's SSD storage disk reads data at 57MB/s and writes it at 32MB/s; it beats the I/O performance of comparably sized HDDs by more than 150 per cent. To ensure compatibility, the SSDs have been designed to look like HDDs with conventional 2.5" and 1.8" sizes.

REVIEW NOTEBOOK PC

MEDION MD95376

RATING ★★★★★

PRICE £899 inc VAT

SUPPLIER www.staples.co.uk

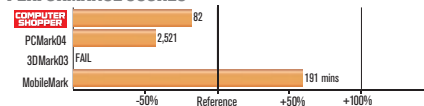
DETAILS www.medion.co.uk

AMD's Turion 64 chip is the company's latest processor designed exclusively for notebook computers. The Medion MD95376 is the first notebook we have seen with this new processor, competitively priced at just under £900.

When closed the notebook's fairly flimsy lid gives it a budget appearance, but the inside is far classier. The black keyboard surround contrasts well with the silver touch pad buttons and speaker grilles, and there is an array of chunky short cut buttons under the screen. The MD95376's 15.4" widescreen LCD is clear and bright with wide horizontal viewing angles and even colour distribution, but large blocks of colour have a mesh effect. The notebook's small speakers are loud and sound very clear, even at high volumes, but have little bass.

The front of the MD95376 is blank apart from a couple of power lights, but the left of the notebook has a CardBus slot, modem and Ethernet ports. The USB2.0 ports are all clustered at the rear beside a FireWire socket, which makes it awkward to connect peripherals such as memory keys. The keyboard is one of the best we have seen on a notebook; the keys have masses of travel and perfectly judged feedback. The touch pad is also accurate and the big buttons have a high-quality feel. The notebook has a high-specification DVD

PERFORMANCE SCORES



Generous specification; superb keyboard



Could be faster

SPECIFICATIONS AMD Turion 64 ML-30, 1GB RAM, 100GB hard disk, SIS 760 integrated graphics, DVD+/-RW DL, 15.4" 1,280x800 LCD, weighs 2.95kg

EXCLUSIVE



writer that can write both DVD+RW and DVD-RW discs, as well as high-capacity double-layer discs. Also built into the chassis is 802.11g 54Mbit/s wireless networking, and the 100GB hard disk provides a huge amount of storage. The notebook is just about light enough to be carried around at 2.95kg. The three hours of battery life is enough for the notebook to be used on the move.

The MD95376 has the 1.6GHz version of the Turion 64 processor (ML-30), which gives it solid if not astounding performance. Its score in PCMark04 is about average for a budget notebook, but it did better in the *Shopper* benchmark test, helped by a high score in the Image Manipulation test due to the notebook's 1GB of system memory. The integrated graphics chipset was unable to run our 3D tests, so the notebook is no good for gaming.

The Medion MD95376's combination of stylish looks, good build quality and top-notch features is very impressive for a sub-£900 notebook. It isn't the fastest performer we've seen, but the excellent keyboard, large hard disk and gigabyte of system memory make it a very tempting deal.

Chris Finnamore

HOTLIST NOTEBOOK PC

AVERATEC 3300

RATING ★★★★★

PRICE £764 inc VAT

SUPPLIER www.misco.co.uk

DETAILS www.averatec.co.uk

At under 2kg, Averatec's 3300 is a highly portable notebook with excellent performance and features at a budget price.

It feels rugged and the keyboard, though a rather uninspiring shade of grey, doesn't flex during use and has a pleasant click action. The 12.1" screen's resolution of 1,024x768 is on the small side but is acceptable for office work and surfing the web. A large 60GB hard disk and double-format DVD writer are impressive for the price.

The 3300's chipset is an excellent balance between portability, power and price. It uses a



Pentium M processor to save battery life, but the 1.5GHz chip has more than enough power for the tasks that the notebook will be used for, and 512MB of RAM is plenty for most Windows applications. If you need an ultra-portable but you cannot afford to spend over £1,200, the 3300 is ideal.

SPECIFICATIONS Intel Pentium M 1.5GHz, 512MB RAM, 60GB hard disk, Intel 855GME graphics, 12.1" LCD. Part code AV3350-UE1



REVIEW NOTEBOOK PC

DELL
Inspiron XPS Gen 2

RATING ★★

PRICE £2,099 inc VAT

SUPPLIER Dell 08709 075818

DETAILS www.dell.com

The Inspiron XPS Gen 2 is Dell's first gaming notebook for the UK market. All the models in the Inspiron XPS Gen 2 line-up have nVidia GeForce Go 6800Ultra graphics chipsets, but the model we were sent for review has the faster 2.13GHz processor, 1GB of RAM and a 100GB hard disk.

This is a large notebook and its 4.2kg weight places it in the desktop replacement category. Dell has tried to make the XPS appeal to gamers with its striped metallic lid and large XPS lettering. There are LEDs set into the base, which can be changed in the BIOS to glow with any one of 16 different colours.

The large base leaves plenty of wrist room for long gaming sessions or typing, and the keys have good travel but rather little feedback. The touch pad is accurate but small, which can make navigating the large screen difficult. The right of the chassis has a single FireWire port and SD card reader, and there are six USB2.0 ports on the left and rear, which also houses S-video, D-sub and DVI video outputs. Our model had a high-specification optical drive, capable of writing double-layer DVDs.

The notebook's screen is a strange choice for a gaming notebook. It's a high-contrast reflective LCD, so colours are incredibly vibrant and blacks very deep. This adds a sense of realism to games, especially to the dark and moody atmosphere of



Doom 3.

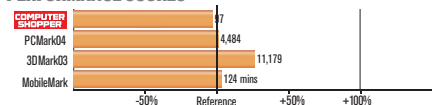
However, the panel has a huge resolution of 1,920x1,200 pixels. Games will not need tricks such as anti-aliasing to look their best, but there's little game support for this resolution.

The Dell's scores in the *Shopper* benchmarks and PCMark04 are very strong, if not quite as high as the Pentium 4-based AJP D900T reviewed in our Gaming notebooks *Labs* test (*Shopper* June 2005), but the XPS Gen 2 managed a respectable 124 minutes in our battery life test with its lower-voltage Pentium M processor. Its 3D performance is staggering, with massive scores in 3DMark03 and 3DMark05, and 67.7fps in Doom 3, making it perfect for maximum-detail gaming.

Dell's XPS Gen 2 is a superb gaming notebook with the best 3D performance we've seen. But with our review model's specification, the notebook is shockingly expensive. We prefer the lower-specified 512MB model, which is £100 cheaper, or the AJP D900T, which has only slightly less gaming performance and is £500 cheaper.

Chris Finnamore

PERFORMANCE SCORES



Shattering 3D performance; high-quality screen



Extremely expensive

SPECIFICATIONS Pentium M 2.13GHz, 1GB RAM, 100GB hard disk, nVidia GeForce Go 6800Ultra graphics, DVD+/-RW, 17" 1,920x1,200 widescreen LCD, weighs 4.2kg. **Part code** PPUK5-N06XPS6R

HOTLIST NOTEBOOK PC

HP
Compaq nx6110

RATING ★★★★★

PRICE £469 inc VAT

SUPPLIER HP 08452 704222

DETAILS www.hp.co.uk

HP's Compaq nx6110 won a Best Buy award in our *Labs* test of budget notebooks (*Shopper* July 2005) thanks to its impressive build quality, screen and performance at the bargain price of £469.

The nx6110 has a serious matt black finish, and build quality is excellent with minimal flex in the base and screen and high-quality plastic surrounding the keyboard. The notebook's keys have excellent travel and feedback.

The nx6110's screen is bright with excellent contrast. At 2.75kg it is fairly portable. Inside are Intel's latest Sonoma chipset and an Intel



Celeron M processor, giving it plenty of performance for office tasks, but an extra 256MB of RAM would be a useful addition. Three hours of battery life is enough for computing on the move, and the notebook has wireless networking as standard. This is a high-quality notebook that is superb value at under £500.

SPECIFICATIONS 1.4GHz Celeron M 360, 256MB RAM, 40GB hard disk, Intel 915GM integrated graphics, DVD/CD-RW, 15" LCD. **Part code** PT601ET

BYTE
SIZE!

Our round-up of the best new gadgets and software

PORT
Chamonix

RATING ★★★★★

PRICE £34 inc VAT

SUPPLIER www.expansys.com

DETAILS www.port-able.com



If you want to take your notebook travelling, or you cycle to work, traditional notebook bags won't be suitable. Port's Chamonix backpack, available in red, blue and grey, is a viable alternative. It looks just like a normal camping rucksack. It's light when empty, but has lots of room. While the padded notebook pouch is enough to house any notebook up to 15.4", a large A4 compartment is big enough for all the notebook accessories you could want to carry. A further front pocket provides more space. There's even a rain cover provided for extra protection. An excellent bag for notebook users on the move in all conditions.

David Ludlow

SAITEK
Notebook Optical Mouse

RATING ★★★★★

PRICE £10 inc VAT

SUPPLIER www.dabs.com

DETAILS www.saitek.com



Like magpies, we at *Computer Shopper* are attracted to bright shiny things, such as Saitek's Notebook Optical Mouse. Plugging it into a spare USB port turns on the light and causes the mouse to glow. We reviewed the blue mouse, but the range is also available in red, yellow and black. This mouse is small and comfortable enough for the odd job on the move, but you'll need a larger mouse for long-term use. The mouse has two buttons and a scroll wheel. They feel well built, and it's unlikely that you'll need more buttons. This is a very cheap mouse that's suitable for carrying around, but it's not quite as stylish as Kensington's Glow Mouse, which we reviewed in *What's New, Shopper* July 2005.

David Ludlow



BYTE SIZE!



Our round-up of the best new gadgets and software

SONY MicroVault 1GB Midi

RATING ★★★★★

PRICE £67 inc VAT

SUPPLIER <http://uk.insight.com>

DETAILS www.sony.co.uk

Flash-based memory keys have seen a massive increase in capacity recently. Sony's latest addition to its MicroVault range is a USB Hi-Speed flash memory stick with a capacity of 1GB. It's very small, half the height of a ballpoint pen, but twice the size. It will fit easily into any pocket. A removable cap provides access to the USB plug, which should connect to any PC, even those with recessed ports. Sadly, there's nowhere to attach the cap when it's removed, so be careful not to lose it. The device comes with Virtual Expander, which compresses files as you copy them. This has a slight performance impact, but it means you can fit in more data. However, there are cheaper 1GB memory keys.

David Ludlow



PLANON SYSTEMS DocuPen R700

RATING ★★★★★

PRICE £134 inc VAT

SUPPLIER www.expansys.com

DETAILS www.planon.com

Planon's DocuPen R700 is a small, black and white handheld scanner, the width of a sheet of A4, that can be used without a PC. It has 2MB of onboard memory, which should be enough for around 40 A4-sized scans. It's fairly easy to use thanks to its single button. However, you need to scan at a constant rate, as the occasional pause turns the scanner off.

Image quality is mixed and depends on how straight you keep the scanner and how constant your pace is. It connects to Windows via a USB connection and imports its pictures into ScanSoft's Paper Port, which is quite easy to use and has OCR built in.

It's quite expensive, though, and as such, it's only really a product for those that want to scan documents on the move.

David Ludlow



REVIEW NOTEBOOK PC

MESH Centrino PCI-X CS

RATING ★★★★★

PRICE £899 inc VAT

SUPPLIER Mesh 08700 464747

DETAILS www.meshcomputers.co.uk

Some consumers want as portable a notebook as possible; others desire power at the expense of all portability. But sometimes you need something powerful that can still be taken on the road, like the Mesh Centrino PCI-X CS.

The notebook has a large footprint and is thick when closed, but looks chunky and dependable. The screen is a sizable 15.4" and has a large resolution of 1,280x800 pixels. The display is bright with excellent contrast and displays colours with a vibrancy that's rare among notebooks at this price.

The large size means that there is plenty of space to rest your wrists when typing, but the keys are springy and lack feedback. The touch pad is excellent; large chunky keys and accurate pointer movement make navigating Windows easy. The notebook's bulky chassis leaves room for several ports; the left of the case has USB2.0, FireWire and CardBus slots, plus a memory card reader with SD/MMC and MS support. The notebook's rear has a further four USB2.0 ports and D-sub and S-video outputs, and there are some miniscule CD controls on the front. There is also an impressive optical drive, capable of writing both + and - DVD discs, as well as the high-capacity double-layer format. Wireless networking is built in, and the 60GB of



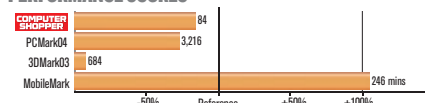
storage space is average for a sub-£1,000 notebook.

The notebook's performance in our benchmarks shows it to be a solid though not spectacular performer. Its scores in the *Shopper* benchmarks and PCMark04 test were average for a notebook at this price, though disappointing for one based on a 1.86GHz Pentium M processor. The integrated Intel graphics are not up to any kind of gaming. We would hope to see some dedicated graphics hardware on a £900 mid-range notebook. Battery life is excellent at just over four hours. At 2.9kg it's just light enough to use on the move.

Mesh's Centrino PCI-X CS is a competent notebook with a great battery life and optical drive, and vibrant screen. Its performance is average for its price, if below par for its processor and chipset. But it lacks dedicated 3D graphics hardware and keyboard feedback. The PCI-X CS does little wrong, but it doesn't do much to ward off the extensive competition in the mid-range notebook market.

Chris Finnamore

PERFORMANCE SCORES



✓ Excellent battery life; vibrant screen

✗ Springy keys; no dedicated 3D hardware

SPECIFICATIONS 1.86GHz Pentium M processor, 512MB RAM, 60GB hard disk, Intel 915GM integrated graphics, internal DVD writer, 15.4" 1,280x800 LCD, weighs 2.9kg. Part code PCI-X CS

HOTLIST NOTEBOOK PC

EVESHAM Quest Explorer

RATING ★★★★★

PRICE £499 inc VAT

SUPPLIER www.lowestonweb.com

DETAILS www.evesham.com

Although not the most stylish or compact notebook we've seen, the Evesham Quest Explorer has impressive performance for the price. It is large and heavy, but the 1,024x768 resolution screen is clear and bright, although it has rather narrow viewing angles. The keyboard is at a good height for comfortable typing.

Aside from a DVD writer, little is missing in terms of features. The Evesham has plenty of ports at the rear and on the left of the chassis, although FireWire is missing. The only other significant omission is wireless networking, but this is an inexpensive upgrade.



Performance is good, apart from the image manipulation score, which could be improved with an upgrade to 512MB of memory. For office work and occasional travel, the Explorer has all the right ingredients at a bargain price.

SPECIFICATIONS 1.6GHz Mobile AMD Sempron 2600+, 256MB RAM, 40GB hard disk, VIA S3G integrated graphics, DVD/CD-RW, 15" LCD. Part code Quest Explorer S26



CHOOSING A...

NOTEBOOK
COMPUTER

Follow our simple step-by-step advice to find the perfect notebook PC for your needs and your budget

1 The minimum specification of notebook we recommend, shown below in grey, is a good starting point when working out your ideal system. This is an average notebook that should cost around £700. It is not particularly powerful or, at 3.5kg, particularly portable. Mobile processors increase battery life and are becoming more common, even at this price.

2 Most people want a better notebook than the minimum – but what is your definition of better? Do you want something more powerful, or lighter and better-looking? Desktop replacement notebooks, which approach the power of a full-size PC, are necessarily large to house the extras. These usually include a desktop processor and larger battery to keep the whole lot running for a decent length of time.

3 If portability is your main priority, keep the spec modest (a Pentium M 1.7GHz with a 15" screen, say) but spend more. This will buy you an executive notebook with the kind of cutting-edge design required to miniaturise without compromising usability. Clever chassis, expensive batteries and the finest materials are prerequisites for superior ultra-portable notebooks.

4 There are features you can add to a notebook without piling on weight or reducing battery life. A 60GB, 80GB or 100GB hard disk and 512MB of RAM won't hurt. Another possibility is an external drive that you can carry with you or leave at home according to the nature of your trip. Some ultra-portables can be attached to an optional docking station, which incorporates drives, ports and extra power for when you need it. It's the best of both worlds, but tends to be expensive.

5 If you're not swayed by ultra-portable chic, you can get a lot more for your money. Today's desktop replacements pile on the features but still keep the price well under £1,500. Alternatively, go for a balanced package: middling power and price in a reasonably portable package. Which one you pick depends on how much power and which features you need, so consider each in turn.

6 Notebooks run the same software as desktops, so our advice on the core spec is the same (see page 18). However, hard disks go up to only 100GB and even the best notebook graphics lag behind desktops.

7 DVD rewriter drives are standard and will allow you to burn CDs and DVDs on the move. If you want to watch movies, consider buying a notebook with a widescreen display.

8 A 1,024x768 screen is the entry level these days, but its size will depend on the notebook's purpose. Ultra-portables might have screens as small as 9". Large widescreen displays have resolutions of 1,200x768 upwards but make for a bulkier notebook.

9 A modem and regular 10/100 Ethernet port are standard. Centrino notebooks also have wireless 802.11b or 802.11g (WiFi), and it's becoming increasingly popular on all models. IEEE-1394 (FireWire) and Bluetooth can be added to the default TV-out and USB2 ports. Memory card readers are extremely common, so check that your camera or MP3 player's format is supported.

10 Once you're happy with your spec, start to shortlist some models you can afford. Check the weight and battery life of each of them. If these aren't acceptable, you need to reconsider how much power and which features you really need.

FILL IN YOUR SPECS HERE

(Recommended minimum in grey)

PROCESSOR: AMD Mobile Sempron 1800+
MEMORY: 256MB DDR
HARD DISK: 40GB
STORAGE: DVD rewriter
GRAPHICS: Integrated (using system memory)
SCREEN: 1,024x768 LCD
EXTRAS: Wireless networking, FireWire
CONNECTORS: Three USB2, network, modem
SOFTWARE: Windows XP Home Edition
WEIGHT: 3.5kg

BYTE SIZE!



Our round-up of the best new gadgets and software

PORT Ergo Station

RATING ★★★★★

PRICE £60 inc VAT

SUPPLIER www.expansys.com

DETAILS www.port-able.com

Why put your notebook's screen to waste by attaching an external monitor when you get to your desk?

Port's Ergo Station holds your notebook at the correct angle for use as your primary monitor. The metallic blue cradle sits neatly on the desk and is height adjustable, so you can get the perfect viewing angle from any notebook's screen. Wheels on the bottom mean you can swivel the whole unit. It feels sturdy and worked well with our test notebook. It has a four-port USB2 hub, so you can leave your peripherals attached. It's more flexible than the portable Cool Laptop Stand (see www.computershopper.co.uk/reviews/69609), but twice the price.

David Ludlow



ALLUME Aquazone Desktop Garden

RATING ★★★★★

PRICE £14 inc VAT

SUPPLIER www.kochmedia.co.uk

DETAILS www.allume.com

Screensavers might not be strictly necessary now we have LCDs, but when they're as fun as Allume's Aquazone

Desktop Garden they're still worth a look. The software creates a photo-realistic aquarium on your desktop. It's all in 3D, so the fish can swim behind each other and through the various plants scattered around the bottom of the tank. The software is easy to use, and you have full control over the number and types of fish you want; there's a basic choice of 20 types. The detail on each fish is impressive, like watching the real thing – but you don't need to feed this variety! However, you'll end up wanting a large LCD TV so you can enjoy the tank all the time.

David Ludlow

